

REMARKS

Claims 1-10, 12-19 and 21-24 are pending in this application. By this Amendment, claims 1, 3-10, 12 and 14-19 are amended. No new matter is added.

Amendments to claims 1 and 12 better recite the feature of the invention. Claims 3-10 and 14-19 are amended to harmonize the claim language with their respective base claims.

The Applicant thanks Examiners Chu and Baumeister for the courtesies extended to Applicant's representative during the November 20, 2003 Personal Interview. The points discussed are incorporated into the remarks below and constitute the Applicant's record of the interview.

Reconsideration is respectfully requested.

I. The Pending Claims Define Patentable Subject Matter

A. The Office Action rejects claims 1, 3-10, 12, 14-19 and 21-24 under 35 U.S.C. §102(e) over U.S. Patent No. 5,969,461 to Anderson et al. (Anderson). This rejection is respectfully traversed.

Claim 1 relates to a method of manufacture of a semiconductor device and recites, *inter alia*, providing an adhesive between a surface of a semiconductor chip ... and a surface of a substrate having a plurality of leads and an undivided film ..., and the adhesive extends to be disposed on the whole of the undivided film.

The Office Action asserts that Anderson teaches a semiconductor chip 10. However, Anderson discloses at column 2, lines 21-28 that reference numeral 10 is an acoustic wave device and that surfaces acoustic wave (SAW) devices typically include interdigitated electrodes of various configurations disposed on an active area of a face to support acoustic waves thereupon. Anderson further describes that surface acoustic wave devices are frequently used in commercial and other applications as RF and IF filters to provide frequency selectivity and other electronic functions, and that a SAW device depends upon

acoustic wave generation (see column 1, lines 13-16). The term "surface acoustic wave (SAW) device" refers to devices, such as, Rayleigh wave filters, surface skimming bulk wave filters and other devices on pulling acoustic eigenmodes (see column 2, lines 8-11).

Moreover, Anderson teaches that SAW devices are generally very sensitive to surface condition, and that the sensitivity is not of a chemical or electronic charge nature as it is, for example, in the case of semiconductors, but is of a mechanical nature (see column, lines 20-24). Lower cost packaging techniques which are, for example, widely used in connection with semiconductor devices and integrated circuits are not generally used in connection with a SAW devices (see column 1, lines 30-34).

Accordingly, Anderson does not teach or suggest a method of manufacture of a semiconductor device, but instead distinguishes its SAW devices from semiconductors. As such, Anderson is not concerned with problems faced by semiconductor chips and cannot provide an adhesive on the surface of a semiconductor chip.

Claim 1 also recites that the undivided film is formed with a lower adhesion to the adhesive than a base material of the substrate and that a region in which the adhesive is disposed includes a first region with lower adhesion to the adhesive and a second region with high adhesion to the adhesive, with the first region being equal or larger. In other words, as shown in Fig. 1, for example, Applicant's adhesive 30 adheres both on the film 14 and the substrate 10, but the film area of lower adhesion (14) has greater or equal area.

Further, as shown in Fig. 1 of Anderson, an underfill material 28 is not provided on a conductive pad 36 (allegedly corresponding to the film). Instead, the top surface of the conductive pad 36 is completely sealed by dams 26 to provide a cavity 34 free from contact with underfill material 28. Therefore, the conductive pad is not adhered to the underfill material 28 at any location other than perhaps at the lateral edges. Because the alleged film is not adhered to the underfill material 28 across the top of element 36, a region in which the

underfill material 28 is disposed does not include a first region with lower adhesion to the underfill material 28 that is equal to or greater than a region of high adhesion as claimed. Moreover, there is no disclosure of different regions having different adhesion.

Anderson discloses that a portion of the underfill material 28 is disposed on an edge portion of the conductive pad 36 but fails to disclose a portion of the underfill material 28 is disposed on the whole of the conductive pad 36. In the Abstract, Anderson specifically discloses not disposing underfill material 28 on the whole of conductive pad 36 to avoid contamination of active area 12. Thus, because of the cavity 34, Anderson fails to show that the adhesive extends to be disposed on whole of the undivided film.

At least for the reasons described above, Applicant respectfully submits that Anderson fails to teach each and every feature of claim 1. As such, claim 1 is patentably distinct from the applied reference.

Claims 3-10 and 23 are allowable at least for their dependence on claim 1, as well as for the additional features they recite. For example, claim 7 recites that the undivided film is formed with at least one opening exposing a surface of the substrate. Anderson, on the other hand, teaches at column 3, lines 61-66 that the conductive pad 36 is interposed between a dam 26 and a top 30 of the substrate 16 to substantially cover the substrate 16 inside of a boundary 32 defined by the dam 26. As such, Anderson does not teach or suggest providing at least one opening exposing a surface of the substrate.

Claim 8 recites that the undivided film is formed to project outside a region in which the semiconductor chip is adhered. As shown in Fig. 1 of Anderson, even if the acoustic device 10 is considered to be a semiconductor device, the conductive pad 36 is not formed to project outside a region in which the acoustic device is adhered.

Claim 12 recites features similar to those of claim 1. As such, Applicant respectfully submits that claim 12 is similarly patentably distinct from applied reference.

Claims 14-19, 21-22 and 24 are allowable at least for their dependence on allowable base claim 12.

At least for the reasons discussed above, Applicant respectfully requests withdrawal of this rejection.

B. The Office Action rejects claims 2 and 13 under 35 U.S.C. §103(a) over Anderson in view of JP-07169795 to Oda. This rejection is respectfully traversed.

As described above, Anderson fails to teach or suggest some of the features recited in claims 1 and 12. Oda does not overcome the deficiencies of Anderson. Accordingly, claims 2 and 13 are allowable at least for their dependence on allowable base claims.

Withdrawal of this rejection is respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-10, 12-19 and 21-24 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Seth S. Kim
Registration No. 54,577

JAO:SSK/can

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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